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C-A OPERATIONS PROCEDURES MANUAL

13.8.1 Inspections & Tests

Text Pages 2 through 5

Hand Processed Changes

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Approved: *Signature on File* _____
Collider-Accelerator Department Chairman Date

D. Passarello

13.8.1 Inspections & Acceptance

1. **Purpose**

The requirements of this document apply to the inspection/test of supplies, components, assemblies, subsystems, and systems purchased/manufactured by the C-A Department that will ultimately be used within the accelerator complex. This document supplements the requirements of the BNL Inspections and Acceptance Subject Area

2. **Responsibilities**

The responsible individual shall determine: if inspections/tests are required, the criteria for acceptable performance and which measurements are required to validate that the items/service is acceptable for its intended propose.

3. **Prerequisites**

None

4. **Precautions**

None

5. **Procedure**

5.1 Internal and externally purchased items or services, and in-process or final (completed) work (e.g., manufactured and assembled items) shall be inspected/tested as specified by the responsible individual.

Note:

- Documented criteria and inspection/test results are required for items/services that are classified as A1 (Critical), A2 (Major) or a noncommercial purchased item/system greater than or equal to \$100K. Documentation shall be maintained and dispositioned by the responsible individual.
- Documenting criteria and inspection/test results for items/services that are classified as A3 (Minor) or A4 (Negligible) is at the discretion of the responsible individual. Documentation shall be maintained and dispositioned by the responsible individual.

5.2 When inspection/test procedures are developed they should include, as appropriate, the following items:

- First Article Verification
- Parameters to be inspected and whether data is to be recorded for each parameter.

- Parameters to be accepted on the basis of a review of supplier test data and/or inspection results.
 - Requirements for special tools, fixtures, gauges, set-ups, etc
 - Additional criteria, not specified on the drawings, specifications or purchase documents.
- 5.2.1 Individuals requisitioning general use items from the Supply and Material Division shall determine whether the items must be inspected and/or tested prior to use. The determination should be based upon an evaluation of the specific application of each item.
- 5.3 Individuals who are procuring material from outside suppliers shall consider the special requirements specified in C-A OPM 13.7.1, [C-A and SMD Procurement Guidelines](#), regarding
- Procurement of item(s)/material which require rigging upon delivery to BNL
 - Use of Approved Electrical Equipment
 - Targets of theft material
 - Hazardous Material
 - ISM (Integrated Safety Management) requirements
 - Quality Assurance Requirements
 - Deviations from procurement requirements
- 5.4 Upon receipt, all purchased item(s) shall be inspected to at least to the following minimum criteria,
- Checking that the correct quantity was received (count);
 - Checking for possible damage (condition);
 - Checking that the correct item was received (identity);
 - Checking for possible suspect/counterfeit items (S/CIs). Refer to [Section 1. Detecting and Reporting Suspect/Counterfeit Items](#) in the [Suspect/Counterfeit Items](#) Subject Area for further guidance.
- 5.5 If inspection/test data was recorded, it should be reviewed by the responsible individual to verify that required inspections were performed satisfactorily and that all reported non-conformances have been evaluated to determine their validity and possible impact on ESS&H and/or operations. Disposition of non-conforming items is determined by the responsible individual.
- 5.5.1 Purchased items classified as A-1 (Critical) or A-2 (Major) that are nonconforming shall be reported to the Procurement & Property Management Division (PPM).
- 5.5.2 Internally constructed items classified as A-1 (Critical) or A-2 (Major) that are nonconforming shall be reported to the C-A QA office.

5.6 It is recommended that non-conforming items that are awaiting disposition, and defective items that are waiting to be reworked, returned, scrapped, or have been reworked and awaiting re-inspection/test, be uniquely identified, and/or segregated, from acceptable items, or items awaiting inspection.

5.6.1 When a disposition of rework, scrap, or repair of purchased items is made, the PPM should be consulted to determine whether the BNL costs in carrying out the disposition can be charged back to the supplier. If the item is from a another BNL organization, they should be consulted to determine if there is any charge back

5.7 Source Inspections

5.7.1 The following criteria shall be considered by the responsible individual to determine if source inspection is required.

- Critical item is purchased at a level of assembly where the internal quality cannot be verified upon receipt at BNL without costly disassembly or destructive testing;
- Special inspection or test equipment, or test environments to verify product conformance with specific requirements, cannot be feasibly or economically reproduced, or made available at BNL;
- Items are to be delivered by the supplier directly to another vendor for additional processing, or to a contract destination other than BNL;
- Manpower availability;
- The logistics and costs involved in inspecting large and bulk items;
- Scheduling requirements.

5.7.2 The responsible individual shall ensure that when source inspection is required it is specified in the procurement documentation. This document shall define the format of the source inspection and the following responsibilities.

- C-A staff perform and document specified inspections/tests, or examinations of the item or service, at various stages of completion, or of the end item or service itself;
- C-A staff witness and document the performance of specific inspections, operations, or processes as it is performed by the seller's personnel;
- Inspections conducted by authorized third party inspectors.
- Review/witness and document processes at location other than BNL

5.7.3 Source inspection data shall be reviewed by the responsible individual.

- 5.7.4 Non-conformances detected at the supplier facilities during source inspection shall be documented and held for further review/disposition. Suppliers may be contacted by the responsible individual, or designee, to discuss discrepancies, if appropriate.

6. Documentation

When inspection/test procedures are developed and inspection/test results have been recorded, the responsible individual shall maintain these documents per [C-A OPM 13.4.1, “Record Management”](#).

7. References

- 7.1 [C-A OPM 13.4.1, “Record Management”](#).
7.2 C-A OPM 13.7.1, [C-A and SMD Procurement Guidelines](#)
7.3 [SBMS, Inspections and Acceptance](#)
7.4 [SBMS, Suspect/Counterfeit Items](#)

8. Attachments

None